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Mail Stop Amendment Commissioner for Patents

P.O. Box 1450 Alexandria, VA 22313-1450

TOWNSEND and TOWNSEND and CREW LI

Attorney Docket No.: 016930-000816US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

OCT. 2 7 2006

In re application of:

Heidrun Engler et al.

Application No.: 10/055,863

Filed: January 22, 2002

For: COMPOSITIONS AND METHODS FOR ENHANCING DELIVERY OF THERAPEUTIC AGENTS TO CELLS

Confirmation No.: 4929

Examiner: Elli Peselev

Art Unit: 1623

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT UNDER

37 CFR §1.97 and §1.98

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. The following copies of the references [in compliance with the requirements of 37 CFR §1.98(a)(2)] are enclosed:

A13. BLAESE et al., "Vectors in Cancer Therapy: How Will They Deliver?" Cancer Gene Therapy, 1995, Vol. 2, No. 4, pp. 291-297;

A14. BRAMSON et al., "The USe of Adenoviral Vectors for Gene Therapy and Gene Transfer in Vivo," Current Opinion in Biotechnology, 1995, Vol. 6, pp. 590-595;

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Heidrun Engler et al. Application No.: 10/055,863

Page 2

- A15. van BUREN et al., "Inactivation of Human Immunodeficiency Virus Type 1 by Alcohols," October 1994, Vol. 28, No. 2, pp. 137-148;
- A16. CALBIOCHEM, "Biochemical/Immunochemical 1992 Catalog," <u>Calbiochem Biochemicals</u>, 1992, pp. 322, 05, 65, 259;
- A18. CORDIER et al., "Complete Recovery of Mice from a Pre-established Tumor by Direct Intratumoral Delivery of an Adenovirus Vector Harboring the Murine IL-2 Gene," Gene Therapy, 1995, Vol. 2, pp. 16-21.
- A19. CROYLE et al., "Development of Formulations that Enhance Physical Stability of Viral Vectors for Gene Therapy," Gene Therapy, 2001, Vol. 8, pp. 1281-1290:
- A21. CULVER et al., "Gene Therapy for Cancer," <u>Treatment Information Group (TIG)</u>, May 1994, Vol. 10, No. 5, pp. 174-178;
- A22. DESCAMPS et al., "Strategies for Cancer Gene Therapy Using Adenoviral Vectors," <u>Journal of Molecular Medicine</u>, 1996, Vol. 74, pp. 183-189.
- A25. GARDLIK et al. "Vectors and Delivery Systems in Gene Therapy," Medical Science Monitor, 2005, Vol. 11, No. 4, pp. RA110-121;
- A26. GOEDDEL, et al., "The Structure of Eight Distinct Cloned Human Leukocyte Interferon cDNAs," Nature, 1981, Vol 290, pp. 20-26;
- A27. GONCALVES, Manuel A.F.V., "A Concise Peer Into the Background, Initial Thoughts and Practices of Human Gene Therapy," <u>BioEssays</u>, 2005, Vol. 27, pp. 506-517;
- A29. HADDADA et al., "Gene Therapy Using Adenovirus Vectors," <u>Current Topics in Microbiology and Immunology</u>, 1995, Vol. 199, No. 3, pp. 297-306;
- A30. HADDADA et al., "Adenoviral Interleukin-2 Gene Transfer into P815 Tumor Cells Abrogates Tumorigenicity and Induces Antitumoral Immunity in Mice," <u>Human Gene Therapy</u>, 1993, Vol 4, pp. 703-711;
- A31. HARRIS et al., "Adenovirus-mediated p53 Gene Transfer Inhibist Growth of Human Tumor Cells Expressing Mutant p53 Protein," <u>Cancer Gene Therapy</u>, 1996, Vol. 3, No. 2, pp. 121-130;
- A34. O'DONNELL et al., "Salvage Intravescal Therapy with Interferon- α 2B Plus Low Dose Bacillus Calmette-Guerin is Effective in Patients with Superficial Bladder Cancer in Whol Bacillus Calmette-Guerin Alone Previously Failed," <u>The Journal of Urology</u>, October 2001, Vol 166, pp. 1300-1305.

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Page 3

In accordance with 37 CFR §1.98(d), copy of the references can be found in Application No. 08/889,355, filed July 8, 1997 (Attorney Docket No. 016930-000811US):

A23. ECK et al., "Gene Based Therapy," <u>The Pharmacological Basis of Therapeutics</u>, 1995, 9th edition, Goodman & Gilman, pp. 77-101.

In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 10/454,662, filed June 3, 2003 (Attorney Docket No. 016930-000815US).

- A10. WO 1995/10265 published on April 20, 1995;
- A11. WO 1997/11682 published on April 3, 1997;
- A12. ASSOCIATED PRESS, "One Way to Kill Cancer: Give a Cold," <u>The Augusta Chronicle</u>, May 20, 1997, (accessed by PTO on World Wide Web at CNN.com on May 22, 1997);
- A17. CONNOR et al., "Identification of Polyamides that Enhance Adenovirus-Mediated Gene Expression in the Urothelium," Gene Therapy, 2001, Vol. 8, pp. 41-48;
- A20. CRYSTAL et al., "Transfer of Genes to Humans: Early Lessons and Obstacles to Success," <u>Science</u>, 1995, Vol. 270, pp.404-410;
- A24. FRIEDMAN, Theodore, "Gene Therapy of Cancer Through Restoration of Tumor-Suppressor Functions?" Cancer, 1992, Vol. 74, pp. 183-189;
- A28 GUZMAN et al., "Efficient and Selective Adenovirus-Mediated Gene Transfer into Vascular Neointima" Circulation, 1993, Vol. 88, Issue 4, No. 11, pp. 1-80;
- A32. HJEMELAND et al., "A New Class of Nonionic Detergents with a Gluconamide Polar Group," <u>Analytical Biochemistry</u> Vol. 130, pp. 485-490;
- A33. LEDLEY, Fred D. "Nonviral Gene Therapy: The PRomise of Genes as Pharmaceutical Products" <u>Human Gene Therapy</u>, September 1995, Vol. 6, pp. 1129-1144;
- A35. ORKIN et al., "Report and Recommendations of the Panel to Assess the NIH Investment in Research on Gene Therapy," Issued by the U.S. National Institutes of Health, Dec. 1995;
- A36. PAGLIARO et al., "Repeated Intracesical Instillations of an Adnoviral Vector in Patients with Locally Advanced Bladder Cancer: A Phase I Study of *p53* Gene Therapy," Journal of Clinical Oncology, June 15, 2003, Vol. 21, No. 12, pp. 2247-2253;

Heidrun Engler et al.

Application No.: 10/055,863

Page 4

A37. SCHMOLKA, Irving R., "A Comparison of Block Copolymer Sufactant Gels¹," JAOCS, March 1991, Vol. 68, no. 3, pp. 206-209;

A38. YAMASHITA et al., "Syn3 Provides High Levels of Intrvescal Adnoviral-Mediated Gene Transfer for Gene Therapy of Genetically Altered Urothelium and Superficial Baldder Cancer," <u>Cancer Gene Therapy</u>, 2002, Vol. 9, pp. 681-686.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This IDS is being filed before the mailing date of the final Office Action or Notice of Allowance.

Please charge the IDS fee of \$180 to Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

Frank J. Mycroft Reg. No. 46,946

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, Eighth Floor San Francisco, California 94111-3834

Tel: 925-472-5000 Fax: 925-472-8895

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FEE TRANSMITTAL
For FY 2006

Applicant claims small entity status. See 37 CFR 1.27

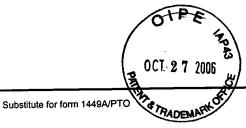
TOTAL AMOUNT OF PAYMENT (\$) 180

METHOD OF PAYMENT (check all that apply)

	Complete if Known	
Application Number	10/055,863	
Filing Date	January 22, 2002	
First Named Inventor	Engler, Heidrun	
Examiner Name	Elli Peselev	
Art Unit	1623	
Attorney Docket No.	016930-000816US	

METHOD OF PAYMENT	(check all that a	pply)					
Check Credit C	Card Money	Order	None	Other (p	lease identify):		
Deposit Account D	Peposit Account Num	ber: <u>20-143</u>	0	_Deposit Acco	ount Name: Tow	nsend and Tov	vnsend and Crew LLP
For the above-ider	ntified deposit accou	ınt, the Direc	tor is here	by authorized	to: (check all t	hat apply)	
Charge fee(s)) indicated below			Cha	rge fee(s) indic	ated below, ex	cept for the filing fee
Charge any ac	dditional fee(s) or u	nderpayment	s of fee(s) X cros	lit any overpay	mente	
WARNING: Information on this	l 1.16 and 1.17 s form may become p	ublic. Credit	card inform	nation should n	ot be included	on this form. Pro	vide credit card
information and authorization	on PTO-2038.		<u> </u>				
FEE CALCULATION							
1. BASIC FILING, SEAF	RCH, AND EXAM FILING FEE:			CH FEES	EVAMIN	ATION FEES	
	Small Ent	-		mall Entity		nall Entity	
Application Type	Fee (\$) Fee (\$	1	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fees Paid (\$)
Utility	300 150		500	250	200	100	
Design	200 100		100	50	130	65	1000 m
Plant	200 100		300	150	160	80	
Reissue	300 150		500	250	600	300	
Provisional	200 100		0	0	0	0	
2. EXCESS CLAIM FEE	S						Small_Entity
Fee Description						Fee (\$)	Fee (\$)
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Each independent claim		ing Reissue	es)			200	100
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3. APPLICATION SIZE						~1 ·1	
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listings under 37 CF						ii entity) for	each additional 30
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SUBMITTED BY							

4	SUBMITTED BY			
	Signature	X1612	Registration No. (Attorney/Agent) 46,946	Telephone 925-472-5000
	Name (Print/Type)	Frank J. Mydrott		Date October 23, 2006



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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

Application Number	10/055,863
Filing Date	January 22, 2002
First Named Inventor	Engler, Heidrun
Art Unit	1623
Examiner Name	Elli Peselev
Attorney Docket Number	016930-000816US

Complete if Known

Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ^{2 (# known)}		Ihnat et al.	
	A1	US-2003-0170216	09/11/2003		
	A2	US-2003-0211598	11/13/2003	Engler et al.	
	А3	US-2004-0014709	01/22/2004	Engler et al.	
	A4	US-2005-0025742	02/03/2005	Engler et al.	
	A5	US-2006-0199782	09/07/2006	Engler et al.	
	A6	US-6,165,779	12/26/2000	Engler et al.	
	A7	US-6,312,681	11/6/2001	Engler et al.	**************************************
	A8	US-6,392069	05/21/2002	Engler et al.	
	A9	US-7,002,027	02/21/2006	Engler et al.	

	FOREIGN PATENT DOCUMENTS								
Examiner		Fo	reign Patent De	ocument	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages	٠	
Initials*	No.¹	Country Code ³	Number ⁴	Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	or Relevant Figures Appear	Τ°	
	A10	wo	95/10265	A1	04/20/1998	Cytryx Corporation			
	A11	wo	97/11682	A2	04/03/1997	University of Pittsburgh			

Examiner	Date
Signature	Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional).
Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04.

Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

Applicant is to place a check mark here if English language Translation is attached.

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Complete if Known Substitute for form 1449B/PTO Application Number 10/055,863 Filing Date INFORMATION DISCLOSURE January 22, 2002 STATEMENT BY APPLICANT First Named Inventor Engler, Heidrun Art Unit 1623 (Use as many sheets as necessary) Examiner Name Elli Peselev Attorney Docket Number 016930-000816US 6 Sheet 2

		NON PATENT LITERATURE DOCUM	ENTS		
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the a magazine, journal, serial, symposium, catalog, etc.), date, pag and/or country where put	e(s), volume-iss	propriate), title of the item (book, sue number(s), publisher, city	T²
	A12	ASSOCIATED PRESS, "One Way to Kill Cancer: Giv 20, 1997, (accessed by PTO on World Wide Web at 0	re a Cold," <u>Th</u> CNN.com on	ne Augusta Chronicle, May May 22, 1997).	
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	A14	BRAMSON et al., "The USe of Adenoviral Vectors for Gene Therapy and Gene Transfer in Vivo," Current Opinion in Biotechnology, 1995, Vol. 6, pp. 590-595.			
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	A16	CALBIOCHEM, "Biochemical/Immunochemical 1992 Catalog," <u>Calbiochem Biochemicals</u> , 1992, pp. 322, 05, 65, 259.			
	A17	CONNOR et al., "Identification of Polyamides that Enhance Adenovirus-Mediated Gene Expression in the Urothelium," Gene Therapy, 2001, Vol. 8, pp. 41-48.			
	A18	CORDIER et al., " Complete Recovery of Mice from a Pre-established Tumor by Direct Intratumoral Delivery of an Adenovirus Vector Harboring the Murine IL-2 Gene," Gene Therapy, 1995, Vol. 2, pp. 16-21.			
	A19	CROYLE et al., "Development of Formulations that Enhance Physical Stability of Viral Vectors for Gene Therapy," Gene Therapy, 2001, Vol. 8, pp. 1281-1290.			
•••••••	A20	CRYSTAL et al., "Transfer of Genes to Humans: Early Lessons and Obstacles to Success," Science, 1995, Vol. 270, pp.404-410.			
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	A23	ECK et al., "Gene Based Therapy," The Pharmacolog edition, Goodman & Gilman, pp. 77-101.	gical Basis of	Therapeutics, 1995, 9th	
Examiner Signature			Date Considered		

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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.



of

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Substitute for form 1449B/PTO

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Sheet

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Examiner Name	Elli Peselev	
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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	A24	FRIEDMAN, Theodore, "Gene Therapy of Cancer Through Restoration of Tumor-Suppressor Functions?" Cancer, 1992, Vol. 74, pp. 183-189.	
	A25	GARDLIK et al. "Vectors and Delivery Systems in Gene Therapy," Medical Science Monitor, 2005, Vol. 11, No. 4, pp. RA110-121.	
	A26	GOEDDEL, et al., "The Structure of Eight Distinct Cloned Human Leukocyte Interferon cDNAs," Nature, 1981, Vol 290, pp. 20-26.	
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	A29	HADDADA et al., "Gene Therapy Using Adenovirus Vectors," Current Topics in Microbiology and Immunology, 1995, Vol. 199, No. 3, pp. 297-306.	
	A30	HADDADA et al., "Adenoviral Interleukin-2 Gene Transfer into P815 Tumor Cells Abrogates Tumorigenicity and Induces Antitumoral Immunity in Mice," <u>Human Gene Therapy</u> , 1993, Vol 4, pp. 703-711.	
••••••	A31	HARRIS et al., "Adenovirus-mediated p53 Gene Transfer Inhibist Growth of Human Tumor Cells Expressing Mutant p53 Protein," Cancer Gene Therapy, 1996, Vol. 3, No. 2, pp. 121-130.	
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Examiner Signature		Date Considered	

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Complete if Known Substitute for form 1449B/PTO Application Number 10/055,863 Filing Date INFORMATION DISC January 22, 2002 STATEMENT BY APPLICANT First Named Inventor Engler, Heidrun Art Unit 1623 (Use as many sheets as necessary) Examiner Name Elli Peselev 6 Attorney Docket Number 016930-000816US Sheet 4

	NON PATENT LITERATURE DOCUMENTS					
Examiner Initials * Cite No. 1 Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (boo magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
	A35	ORKIN et al., "Report and Recommendations of the Panel to Assess the NIH Investment in Research on Gene Therapy," Issued by the U.S. National Institutes of Health, Dec. 1995.				
	A36	PAGLIARO et al., "Repeated Intracesical Instillations of an Adnoviral Vector in Patients with Locally Advanced Bladder Cancer: A Phase I Study of <i>p53</i> Gene Therapy," <u>Journal of Clinical Oncology</u> , June 15, 2003, Vol. 21, No. 12, pp. 2247-2253.				
	A37	SCHMOLKA, Irving R., "A Comparison of Block Copolymer Sufactant Gels ¹ ," <u>JAOCS</u> , March 1991, Vol. 68, no. 3, pp. 206-209.				
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Examiner Signature		Date Considered		

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